



DIGITAL HEALTH
MEETS
QUADRUPLE AIM

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WORD FROM **THE CEO**

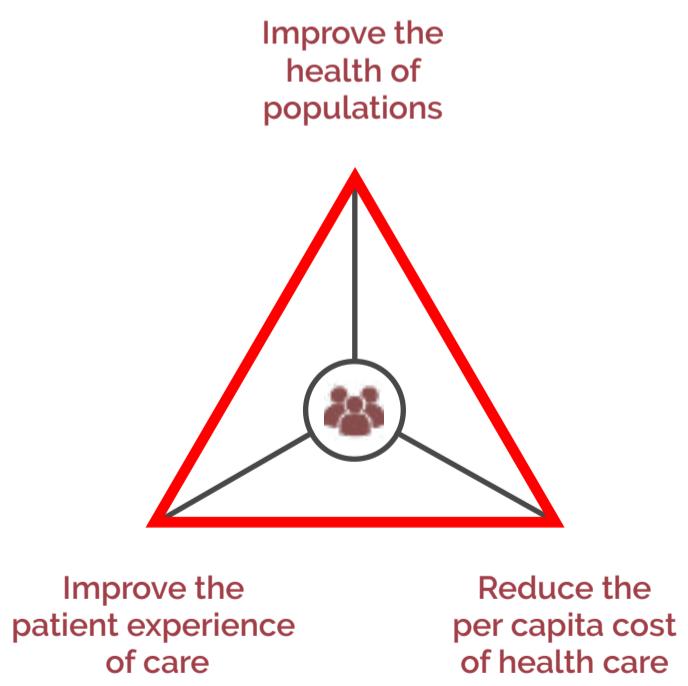
Thank you for taking the time out of your busy schedule to read our ebook on current challenges medical physicians and clinicians face. Digital health and the existing triple aim framework can provide the necessary infrastructure, tools, and processes to alleviate the challenges they face. Enjoy!

INTRODUCTION



For decades, the US healthcare industry has been a critical cornerstone in American prosperity and longevity for its citizens. So much so, many countries have modeled their health systems after that of the US. However, as with any other system, the US healthcare system has its flaws, drawbacks, and inefficiencies that require improvement. That's where triple aim comes in.

In 2009, The [Institute for Healthcare Improvement](#) (IHI) created a framework (Triple Aim) which outlined a standardized approach to optimizing health system performance over time. While some healthcare organizations adopted this framework with moderate success the framework is now at a new point of evolution.



IT'S TIME FOR TRIPLE AIM TO EVOLVE

In the landmark [2012 JAMA survey](#) measuring US physician burnout and job satisfaction versus the general population, an alarming statistic was brought to light. Measured using the highly respected Maslach Burnout Inventory (MBI) for healthcare workers, a surprising 37.9% were assessed with high emotional exhaustion, 29.4% high depersonalization and 12.4% a low sense of personal accomplishment.

Based on these scores, almost 1 in 2 doctors (45.8%) were considered to at least experience one symptom of emotional burnout and 48.2% felt work schedules did not leave enough time for a personal life. When compared to a sample of working adults in the general population, physicians displayed burnout symptoms 10% higher and almost double the rate of dissatisfaction with work-life balance.

Although large differences were discovered across specialties, front-line physicians, including those in family, general internal and emergency medicine, appear to be at the greatest risk. These findings have brought new attention to the goals of Triple Aim – enhancing the patient experience, improving population health, and reducing costs –that have been embraced by many healthcare systems to help optimize performance.

However, multiple trends point to major headwinds to achieving these goals. In addition to plummeting physician job satisfaction and increased burnout rates, a [2018 study](#) commissioned by the Association of American Medical Colleges projects shortages of up to 121,300 physicians by 2030, 40% of them in primary care alone. Taken together, they point to serious problems on the horizon for the US healthcare system.



THE CANARIES IN THE COAL MINE

A major component to achieving Triple Aim rests on improving the patient-doctor relationship. However, these and subsequent surveys continue to suggest the wellbeing of physicians has largely taken a back seat in the quest to achieve a system of patient-centered care.

Primary care doctors are caught in the crosshairs between the drive for healthcare efficiency and improving effectiveness. They see patients the most, so are tasked as gatekeepers for much of patients' day-to-day health needs and referrals to specialized care. This push and pull dynamic is prevalent throughout the physician space today. Strengthen that relationship and you go a long way to bringing personalized care back into the system and improving the patient experience.

A major focus of healthcare systems' approach to implementing Triple Aim begins with uncovering roadblocks to find new efficiencies within the system. Physicians are pressured to change to embrace new processes and technology designed to address these issues. However, it's important to remember the wider healthcare system is not known for embracing rapid or dramatic change. In fact, this historic reluctance has created many of the systemic problems Triple Aim is now trying to address.

Although physicians across the healthcare space are facing similar problems, primary care doctors help illustrate the impact of unintended consequences brought about by Triple Aim. Its core patient-centric approach, though laudable, has inadvertently left provider outcomes largely behind. Without health systems addressing this problem, continued and much-needed healthcare reforms will undoubtedly stall.



HOW TRIPLE AIM IMPACTS THE PATIENT EXPERIENCE

Triple Aim is a geared primarily toward measuring, analyzing and improving the patient experience. The goal is to collect quality operational and behavioral data to better understand how patients, providers and healthcare systems interact along the full continuum of care (pre-, during, and post-care delivery). Health systems are leveraging consumer and non-medical, enterprise-grade, web-enabled platforms to help do this.

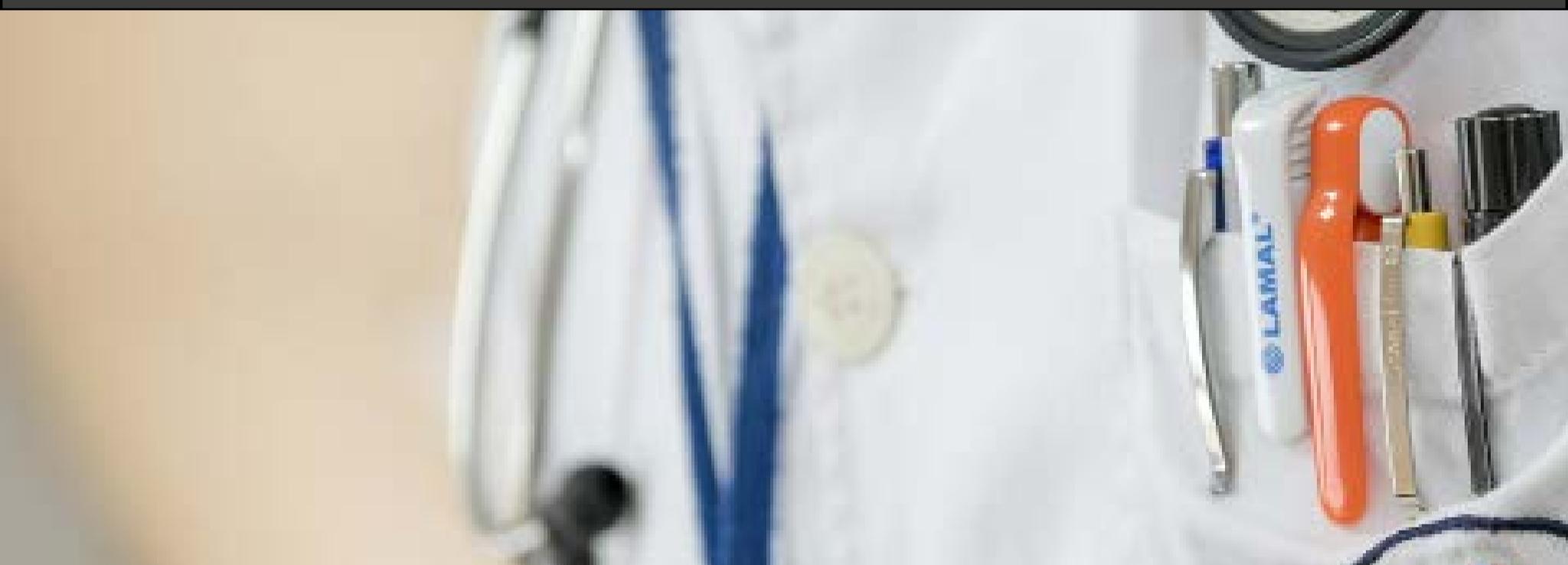
The variety of digital health tools used to deliver content and communications, as well as onsite/offsite sensor and real-time location systems, among others, is creating an exceptional amount of critical data that was unavailable in the past. Healthcare systems are utilizing it to better understand the physical and mental states that influence patient behavior, habits and daily routines pre- and post-care delivery.

Insights inferred from this growing trove of data enables leadership teams, including C-suite and medical directors, to better assess and implement evidence-based approaches to improving their systems and care. The resulting enhancements focused around facilities, workforce SOPs and operational and clinician processes are leveraged to help improve the patient and clinician experience.





OVERCOMING A SYSTEM RELUCTANT TO CHANGE



By-and-large, the core healthcare infrastructure used to run day-to-day operations does not do a particularly good job supporting clinical staff. It is mostly dated, manual and unwieldy, leading to major pain points that are being vocalized across the US healthcare system by physicians and their clinical staffs. Among their common complaints are lack of real-time communication tools, inefficient processes with poor automation, outdated technology and lack of robust inventory management.

Compounding these issues are entrenched operational and territorial silos that continue to plague healthcare. Not only do they hinder healthy innovation within individual systems, but also dampen the progress of positive change across the entire healthcare space.



THE KEY RESTS WITH DOCTORS

Physicians play a critical role as champions for forward-thinking medical advances. Their support helps accelerate the adoption of new technologies geared toward removing physical barriers to patient care and with it, hopes of improving patient outcomes and bringing new efficiencies to clinical practices. Remote doctor visits and patient monitoring, medication management technologies, tele-mentoring, patient-controlled PHI, educational self-help tools (pre- and post-care) and improved emergency medical response are just some of the advancements gaining traction.

At risk is the suppression of further advances in the healthcare space, or at least a significant deceleration of their implementation, as physicians become unengaged due to increased physical and mental burdens of their profession. Unhappy doctors are much less likely to embrace technologies that they feel, at best, will compound already heavy workloads and demand a steep learning curve among their staffs.



THE CASE OF EHRS

One example that illustrates this is the implementation of universal EHR (electronic health records). There is widespread agreement that legacy patient record systems tied to paper are untenable in the modern age. Reforms to move to a flexible digital system, meant to streamline record keeping that easily follows patients throughout the entire healthcare journey, has proved difficult in practice. Beyond the system-level challenges to creating a framework where digital records can exist and readily flow across health systems, the bulk of the EHR burden is now falling on physicians.

Overall, physicians support the concept of EHRs. Burdensome work related to the complexity of EHRs, however, has significantly worsened job satisfaction and is taking time away from direct patient care at a 2 to 1 margin. In a 2016 study led by Mayo Clinic, the use of electronic health records and computerized order entry is associated with higher rates of physician job satisfaction and burnout.

What was meant to help physicians improve the quality of care of their patients through better documentation and measurement, instead, appears to have contributed to a decrease in that care. This does not diminish the fact that digital health is a vital tool to advance the delivery of healthcare.

A comprehensive digital records and care delivery platform must be available across the entire healthcare system to continue to move health reforms forward. What we are now learning, however, is how we assess the impact of technology and systems on people, particularly those on the front lines of clinical care, must change.



HOW WE FAIL PHYSICIANS

High-touch professions such as medicine tend to attract many individuals who possess a true desire to make a difference in people's lives. Historically, this has been true of healthcare. It has been a driving force that prompts people to embrace the immense time and effort it takes to train to become a physician. Take that away, and you risk creating major shortages of qualified medical professionals.



The complexity of the modern US healthcare system is increasingly at odds with that sentiment, driving a wedge between physicians and their patients. While Triple Aim correctly recognizes that the administration required to operate a clinical practice threatens to fully overwhelm the ability to deliver personalized, quality healthcare, it falls short on taking care of the physical and mental health of those delivering that care.

You don't have to look far to see where such a path can lead. Consider the case of public teachers. They widely report feeling under siege by politicians, overwhelmed by burdensome administrative requirements and being held to unrealistic expectations. Sound familiar?

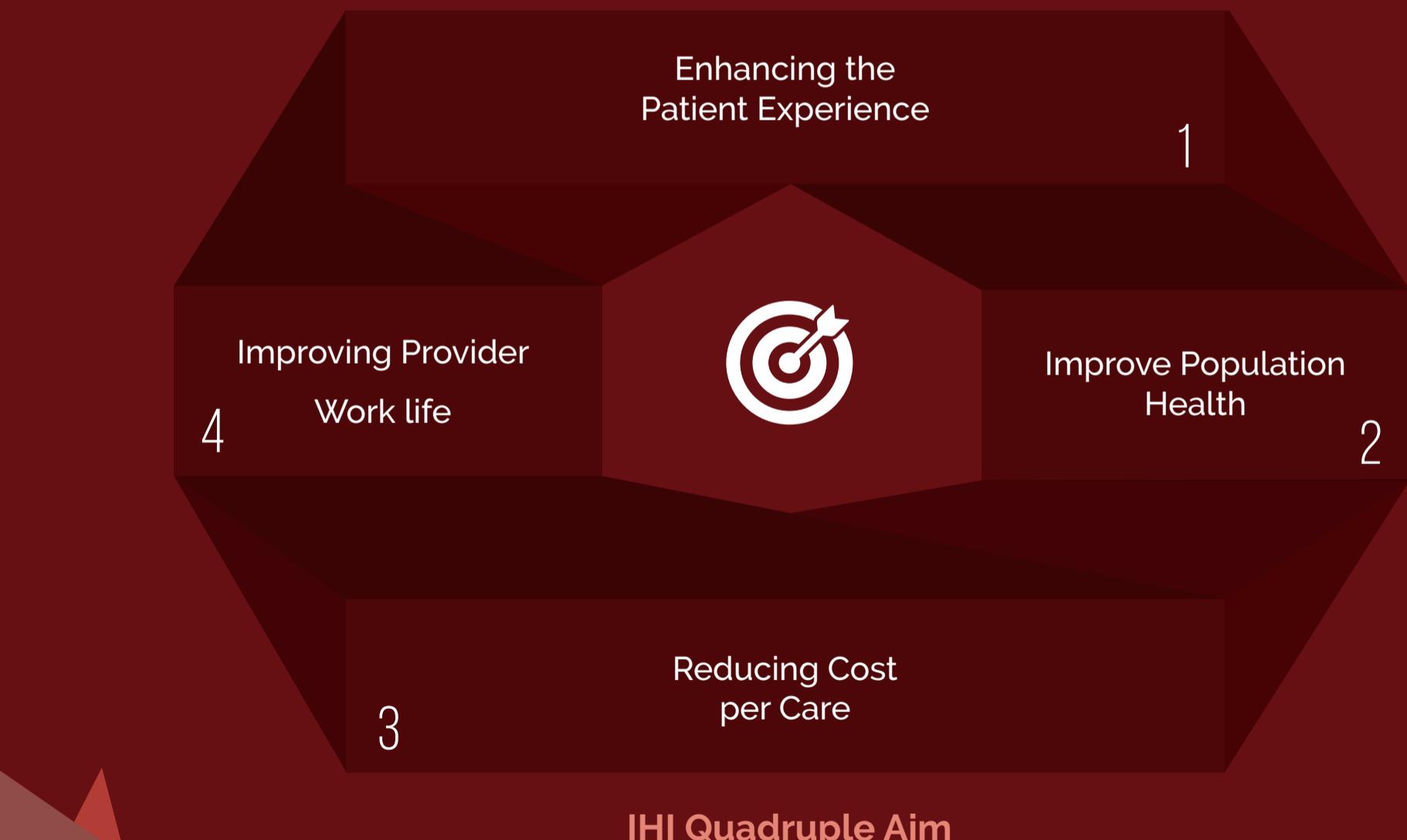
Much like physicians, public school teachers are feeling powerless and overwhelmed. They are now leaving the teaching profession in droves and others are turning away from pursuing the field altogether. This is creating teacher shortages in school districts across the country.

This can be viewed as a cautionary tale for the medical profession, which is showing similar cracks. Furthermore, it is especially worrisome as lifespans increase and the population ages. These will only add further demands to an overtaxed healthcare system.

IT'S TIME FOR QUADRUPLE AIM

It's clear that rapidly rising physician burnout and professional dissatisfaction will increasingly impinge the ability to achieve the three targets of Triple Aim. It's hard to expect physicians to deliver a positive, quality healthcare experience that helps move the needle on these goals while they are overwhelmed, highly stressed and in some cases feeling miserable about their chosen profession.

Although digital health advancements such as secure universal EHRs, process automation platforms, real-time communication and monitoring systems, and healthcare data intelligence tools have room for improvement, they are absolutely necessary if we are to handle the immense quality and financial demands required of today's healthcare. The thoughtful and careful implementation of systems and technologies are important steps we can take to help alleviate administrative burdens from physicians. But they can only go so far in bringing about major shifts in how we deliver that care.





“Physicians and clinicians give so much energy to their daily roles, it’s about time we do the same for them . ”

David De Jesus
CEO - DGMS Labs

—KEEPING TRUST AT ITS CORE

We have to remember that healthcare begins with building trust between doctors and patients. That relationship also bridges the gap to the vast resources available to them to solve patients' health problems. This is best accomplished through doing everything we can to support the core doctor-patient relationship that has defined healthcare for centuries. We need to pursue, with the same effort expended to achieve the patient-centered targets of Triple Aim, a new target of improving the clinician experience and provider outcomes.

Expanding to a Quadruple Aim approach, which incorporates these important provider-centric goals, will better improve the quality of healthcare overall for both physicians and patients. The resulting higher job satisfaction and a better sense of empowerment on the provider side of the relationship will result in tangible and long-lasting benefits to the patient healthcare experience.



ABOUT DGMS LABS



We're a group of professional technologists and business strategists with a deep passion for guiding business leaders on how to leverage technology, process, and security to make their company resilient to the ever-changing industry landscape. Our group has over 30 years combined experience in the field and currently consult a variety of national and international organizations on ways to optimize their technology infrastructure, operational processes, and predictive analytics (business intelligence) from the data gathered.

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